

A New Filmy Fern from the Dominican Republic

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ABSTRACT.—A new species of *Hymenophyllum* subg. *Hymenophyllum* with entire involucrel valves is described from the Dominican Republic on the island of Hispaniola.

During the preparation of a revision of the filmy ferns (Hymenophyllaceae) for the Flora of the Greater Antilles project, a peculiar species was discovered among the undetermined specimens in the Gray Herbarium.

The taxon belongs to *Hymenophyllum* subg. *Hymenophyllum*, following Morton (1968, pp. 162–164), a subgenus represented by only two species in the Antilles. *Hymenophyllum tunbrigense* (L.) Smith is known only from Jamaica and Hispaniola (Proctor 1985, p. 90), whereas *H. fucoides* (Sw.) Sw., is more widely distributed (Proctor, 1985, p. 92; 1989, p. 58). The members of this subgenus are characterized by having toothed segment margins, and most have sinuous to toothed involucrel valves as well. The new species is described as

Hymenophyllum integrivalvatum C. Sánchez sp. nov. Fig. 1

Ab speciebus aliis antillanis subgeneris *Hymenophylli* valvis integris, stipitibus brevissimis, segmentis pinnarum paucis (1 vel 2), necnon laminis glaberrimis diversa.

TYPE—**Dominican Republic**: Pcia. La Vega: Near the pyramid ca. 13 km from Valle Nuevo on the road to San José de Ocoa, ca. 2500 m elev., 22 August 1957, *Gastony, Jones & Norris 740* (GH; isotype US).

Rhizomes creeping, filiform, 0.1–0.3 mm in diam., clothed with deciduous, brownish, pluricellular trichomes, with a few conspicuous, straight roots ca. 5 mm distant. Fronds small, erect, determinate, approximate, 1.15–2.1 cm long.; stipes 0.1–0.3 mm long., 0.2 mm in diam., very narrowly alate throughout, dark brown, glabrous or with a few brownish, often 2-celled trichomes; laminae narrowly ovate, lanceolate or oblong 1.4–1.8 cm long, \times 0.8–1 cm wide, pinnate-pinnatifid; rachises notably flexuous, narrowly and evenly alate, the alae less than 0.1 mm wide, dark brown, glabrous; pinnae 5–8 pairs, spreading to ascending, mostly with 2 acroscopic segments; segments narrowly elliptic, oblong, or linear-oblong, 1.2–1.8 mm wide, glabrous, the margins distantly toothed, the teeth usually more distant than their length and ascending, the midvein dark brown, the lamina tissue olivaceous-green when dry; sori conspicuous in size in comparison with the length of the lamina, borne at the lamina apex or in the distal half, subaxillary on the acroscopic side of the

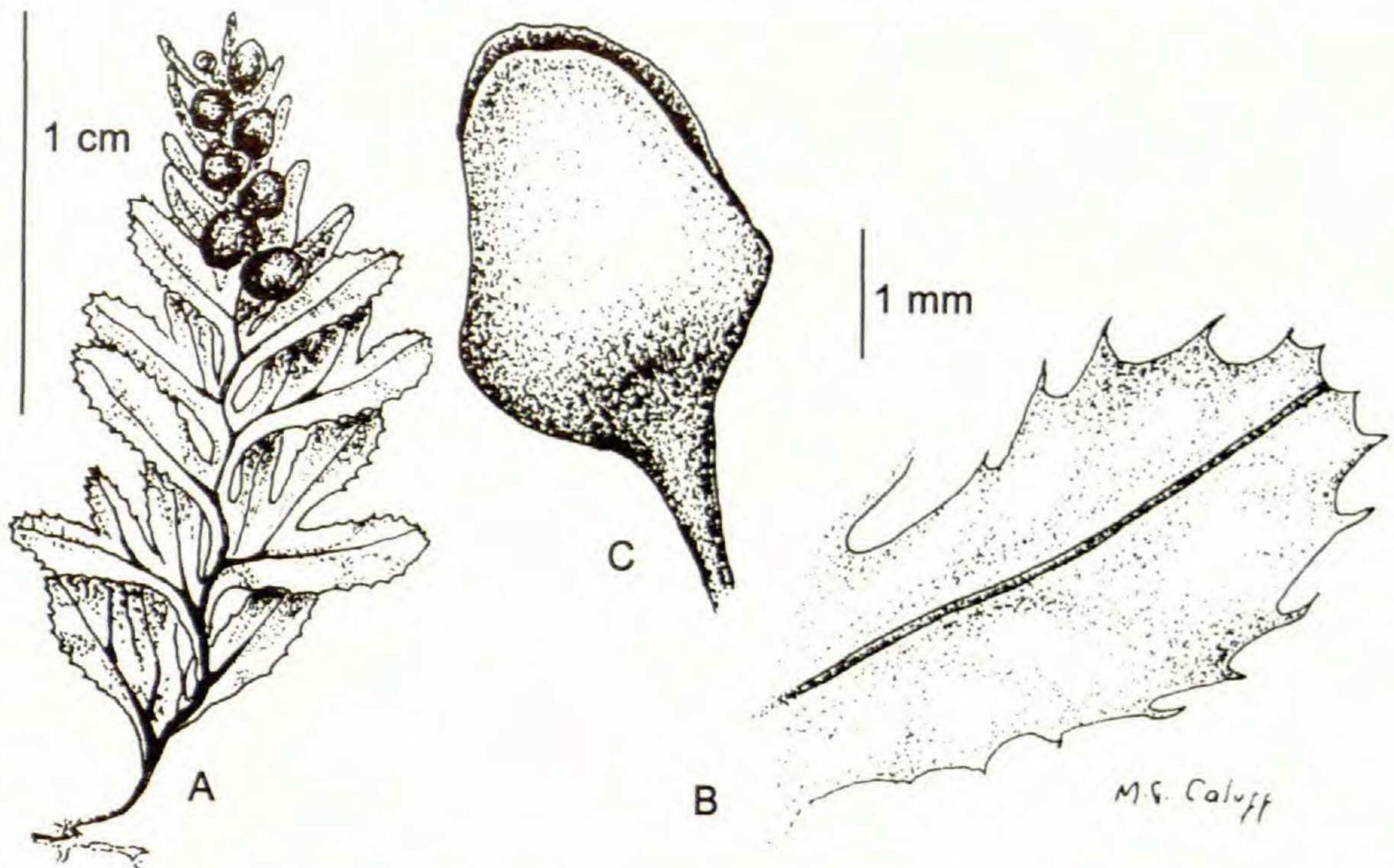


FIG. 1. Holotype of *Hymenophyllum integrivalvatum* (GH). A. Habit of plant. B. Detail of an ultimate segment. C. Detail of a sorus.

pinnae; involucre 1.6–2.2 mm long, 1.4 mm wide, broadly elliptic or broadly ovate, bivalvate, the valves wider than the sterile segments, the margin entire, the filiform receptacle included.

DISTRIBUTION.—Endemic to Hispaniola (Dominican Republic), known only from the type collection.

HABITAT.—Epipetric in very moist burned and timbered pinelands, forming thick mats on rocks along streams in very moist ravines, according to the information on the label.

The new species is most closely related to *H. tunbrigense* (L.) J. E. Smith, which is also known from a few collections from Hispaniola. *Hymenophyllum tunbrigense* differs in having larger fronds, straight rachises with wider alae, more divided pinnae, narrower segments, and sinuous involucre. The entire involucre, very small fronds, and the absence of trichomes on the remainder of the lamina separate the new species from all other Antillean species of subg. *Hymenophyllum*.

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LITERATURE CITED

- MORTON, C. V. 1968. The Genera, Subgenera, and Sections of the Hymenophyllaceae. *Contr. U. S. Natl. Herb.* 38:153–214.
- PROCTOR, G. R. 1985. *Ferns of Jamaica: A guide to the pteridophytes*. British Museum (Natural History), London.
- . 1989. Ferns of Puerto Rico and the Virgin Islands. *Mem. New. York Bot. Gard.* 53: 1–389.